



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,375	07/16/2001	Takashi Harada	WATK:213	2673
7590	11/16/2004		EXAMINER	
Parkhurst & Wendel 1421 Prince Street Suite 210 Alexandria, VA 22314-2805			JOHNSON, JONATHAN J	
			ART UNIT	PAPER NUMBER
			1725	

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

M102

Office Action Summary	Application No.	Applicant(s)
	09/889,375	HARADA ET AL.
	Examiner Jonathan Johnson	Art Unit 1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 03 September 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-12 and 14-18 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-12 and 14-18 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno et al. (5,063,029) in view of Wada et al. (3,927,300). Mizuno et al. teach a honeycomb structure having a large number of through-holes formed in the axial direction and defined by partition walls, wherein slits are formed so as to be exposed to at least part of the outer surface of the honeycomb structure along the axial direction (Figure 4, item 12); where the slits are formed in parallel to the direction of the through holes (Figure 4, through holes and item 12); where the slits are formed at least one end surface of the edge (Figure 4, item 12); where the length of each slit formed at the edge of one surface is in the axial direction of the outer surface (Figure 4, item 12 outer surface), 10% or more of the total length of the honey comb structure (Figure 4, item 12) and at the end surface, 10% or more of the diameter of the honeycomb structure (Figure 4, item 12); where each slit is exposed to at least one end surface so as to connect the two points of the end surface (Figure 4, item 12 across honeycomb); where each slit is exposed to the outer surface over its total length in the through-hole direction (Figure 4, item 12); where each section of the honeycomb structure including each slit there is a continuous area in which no slit is

formed and which is not exposed to the outer surface of the honeycomb structure (figure 4, honeycomb); where the honeycomb section which is normal to the through-holes and in which the length of each slit is the largest, the length of each slit is 30% or more of the distance between the outer surface along the axial direction and the center of the honeycomb structure (figure 4, item 12); wherein each slit is filled with a filler (col. 5, ll. 34-35); wherein it is a combination of two or more honeycomb structures (figure 4, honeycomb openings); which uses a metal having catalytic action and usable for purification (col. 5, ll. 34-47); where the catalytic action is at least one from Pt, Pd, and Rh (col. 5, ll. 40-42); where the section shale of the through-holes is a triangle, a tetragon, a hexagon and a corrugation (col. 1, ll. 45-60); where the partition walls have a filtration ability (col. 1, ll. 15-25); where the filter is capable of capturing and removing the particulate matter contained in a dust containing fluid (col. 1, ll. 15-30). Mizuno et al. also teach the honeycomb structure can be made of a ceramic, however they do not specify any particular ceramic (col. 3, l. 54). Wada et al. teach a ceramic heater made of SiC (col. 1, ll. 40-45). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the honeycomb structure of Mizuno et al. to utilize a silicon carbide in order to generate a given amount of heat (see Wada et al. col. 1, ll. 35-50).

Response to Arguments

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., three slits separated by intervals of 4.55 mm) are not recited in the rejected claim(s). Although the claims

are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues that Mizuno et al. does not teach adding slits to reduce thermal stress and cracks. The examiner agrees. The examiner understands that, as with any other claim limitation, functional language is acceptable so long as it sets definite boundaries on the patent protection sought. *In re Barr*, 170 USPQ 33 (CCPA 1971). A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). To put it another way: While the features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. In the instant case, it is the examiner's position that the slits formed in the honeycomb structure of Mizuno et al. would could perform the same function as claimed in the instant application. Applicant has neither argued or provided any extrinsic evidence showing that honeycomb structure of Mizuno et al. cannot performed in the claimed manner.

With respect to applicant's teaching away argument, applicant argues Wada et al. teaches away from using silicon carbide because it has a negative temperature coefficient. While the examiner agrees that silicon carbide because it has a negative temperature coefficient, the examiner disagrees that Wada et al. teaches that silicon carbide should never be used in a heating

element. In fact, Wada et al. only teaches that silicon carbide elements is not “suitable for use with domestic heaters.” (Wada et al. col. 1, ll. 45-50).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Wada et al. teach a ceramic heater made of SiC (col. 1, ll. 40-45). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the honeycomb structure of Mizuno et al. to utilize a silicon carbide in order to generate a given amount of heat (see Wada et al. col. 1, ll. 35-50).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Johnson whose telephone number is 571-272-1177. The examiner can normally be reached on M-Th 7AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jonathan Johnson
Examiner
Art Unit 1725

jj